



UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/176,124	10/21/98	SCHNEIDER	G 10191/857

KENYON & KENYON
ONE BROADWAY
NEW YORK NY 10004

IM62/0302

EXAMINER

TUNG, T

ART UNIT	PAPER NUMBER
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1743

DATE MAILED:

03/02/00

Use /ind below and/or attached an Office communication concerning this application or
feeding.

Commissioner of Patents and Trademarks

Office Action Summary

Application No.

09/179,719

Applicant(s)

SCHNEIDER ETAL

Examiner

T. TUNG

Group Art Unit

1743

Paper No. 6

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

-Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.

-If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.

-If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.

-Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).

Status

☐ Responsive to communication(s) filed on _____.

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

☒ Claim(s) 1-7 is/are pending in the application.

Of the above claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-7 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claim(s) _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119 (a)-(d)

☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☒ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been

☒ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 1.7.2(a)).

*Certified copies not received: _____.

Attachment(s)

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____ ☐ Interview Summary, PTO-413

☒ Notice of Reference(s) Cited, PTO-892

☐ Notice of Informal Patent Application, PTO-152

☒ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Other _____

Office Action Summary

Art Unit: 1102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 are rejected under 35 U.S.C. 102(b) as being anticipated by Yamada '806 or Yamada '807.

'806 discloses (figures 7-9) a heater 16a located in a plane approximately half way between the top and the bottom of a solid electrolyte sensor. The heater is sandwiched by two insulating layers. See col. 6, lines 20-63.

'807 discloses (figures 1-3) a heater 13 located in a plane approximately half way between the top and the bottom of a solid electrolyte sensor. The heater is sandwiched by two insulating layers. See col. 3, line 23 to col. 8, line 47.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schneider et al in view of Yamada '806 or Yamada '807.

Art Unit: 1102

Schneider discloses applicant's basis sensor structure including a heating element sandwiched by two insulating layers and surrounded by a sealing frame. See col. 2, line 29 to col. 4, line 19. Applicant's claims differ by calling for the heating element to be located in a plane centered between the top and the bottom of the sensor.

As discussed before, either Yamada discloses a heating element located in a plane half way between the top and the bottom of a sensor. It would have been obvious for Schnieder to located his heater in a centered plane as shown by either Yamada, because such a location would permit heat distribution to all portions of the sensor equally. Temperature gradient within a sensor may cause inaccurate measurement as well as cause damage due to thermal shock.

The rejection may also be construed as either Yamada in view of Schneider. It would have been obvious for either Yamada to adopt the sealing frame 26' of Schneider to hermetically seal the heater (oxidation can damage the heater) and to adopt the cover layer 10 of Schneider to provide diffusion resistance and to protect the external electrode.

Claims 1-7 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The disclosure is confusing in that it is not evident if "unsintered" (claim 3, line 2) is actually intended by applicant. The green solid electrolyte bodies are usually sintered during the manufacture of a sensor. Further, the temperature to which a typical sensor is exposed during operation would tend to sinter any unsintered green body. Is applicant's sensor really unsintered?

Art Unit: 1102

Also, page 3, line 25, of the specification appears to call for the sealing frame to be of electrode material. Is that accurate?

Claims 1-7 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

It is unclear what is the final product being claimed by applicant. Claim 3, line 2, calls for a layer structure that is "unsintered". Is applicant claiming the sensor in green body form prior to completing manufacturing?

The examiner can be reached at 703-308-3329. His supervisor Jill Warden can be reached at 703-308-4037. Any general inquiry should be directed to the receptionist at 703-308-0661. A fax number for TC 1700 is 703-305-7719.


Ta Tung

Primary Examiner

Art Unit 1743